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FIG. 1

OSI DIRECTORY PRODUCTS

3COM	1	0	1
ALCATEL TITN	1	1	1
BOLDON JAMES	1	0	1
BT	1	1	1
BRUNEL UNIVERSITY	1	0	1
CONTROL DATA SYSTEMS	1	1	1
CRAY RESEARCH	1	1	1
DATA CONNECTION	3	1	2
DIGITAL	2	1	2
GPT	1	1	1
HEWLETT PACKARD	1	1	1
IBM	5	5	5
ICL	5	4	4
ISODE CONSORTIUM	1	1	1
MARBEN PRODUIT	2	2	2
MOTOROLA COMP GROUP	1	1	0
NCR	1	1	1
NEXOR	3	1	2
OISWARE	1	1	1
OLIVETTI	1	1	1
RETIX	1	1	1
SIEMENS NIXDORF	2	2	2
SOFTWARE KENETICS	1	1	1
STRATUS COMPUTER	2	2	2
TANDEM COMPUTERS	2	2	2
UNISYS	5	5	5
WANG	1	1	1
WOLLONGONG GROUP	2	2	2

Sheet 1 of 2

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FIG. 2A

PRINCIPAL DESIGN

REPRESENTING X.500 IN A RDBMS
- DATA EXTENSIBILITY AND COMPLEXITY
- OBJECT ORIENTATED AND HIERARCHICAL

EMP#	NAME	AGE	SALARY

↓ RELATIONAL

TYPE	SYNTAX	VALUE

↓ X.500

PROPERTY

OBJECT NAME	PARENT NAME	TYPE	SYNTAX	VALUE

CONCEPTUAL DESIGN

IMPLEMENTING X.500 IN A RDBMS
- ATTRIBUTES AND VALUES
- HIERARCHY AND NAMES
- ALIASES
- DATA TOLERANCE

HIERARCHY

EID	PARENT	ALIAS	NAME

↓

PARENT	PATH

↓

ALIAS	A-EID

↓

NAMENORM	NAMERAW

OBJECT

EID	AID	VID	DISTING	VALUE

↓

NAMENORM	NAMERAW

ATTRIBUTE

AID	TYPE	SYNTAX	OBJECTID

FUNCTIONAL DECOMPOSITION →

SERVICE DECOMPOSITION →

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FIG. 2B

LOGICAL DESIGN

PERFORMANCE ENHANCEMENTS FOR RDBMS
- INDEXING OPTION
- I/O CONSIDERATIONS
- MANAGEMENT

DIT

EID	PARENT	ALIAS	RDN

TREE

EID	PATH

ALIAS

EID	A-EID

NAME

EID	RAW

SEARCH

EID	AID	VID	DISTING	NORM

ENTRY

EID	AID	VID	RAW

ATTR

AID	SYX	DESC	OBJECTED

PHYSICAL TRANSFORMATION →

PHYSICAL DESIGN

REALIZING X.500 IN A RDBMS
- EFFICIENCY
- PORTABILITY
- FUNCTIONAL EXTENSIBILITY

DIT

EID	PARENT	RDNKEY	RDN	FLAGS

TREE

EID	LEV1	LEV2	LEV3	LEV4	PATH	FLAGS

ALIAS

EID	A-EID	FLAGS

NAME

EID	RAW	FLAGS

INFO

MAXEID	FLAGS

SEARCH

EID	AID	VID	NORMKEY	NORM	FLAGS

ENTRY

EID	AID	VID	RAW	FLAGS

SENTRY

EID	AID	VID	VALUE	FLAGS

BLOB

EID	AID	VID	VFRAG	RAW	FLAGS

ATTR

AID	SYX	DESC	OBJECTID	FLAGS

OCLASS

OCID	DESC	OBJECTID	MUST LIST	MAY LIST	SUPER LIST	FLAGS

5,504,892

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O.G. FIG.
CLASS
SUBCLASS

FIG. 3

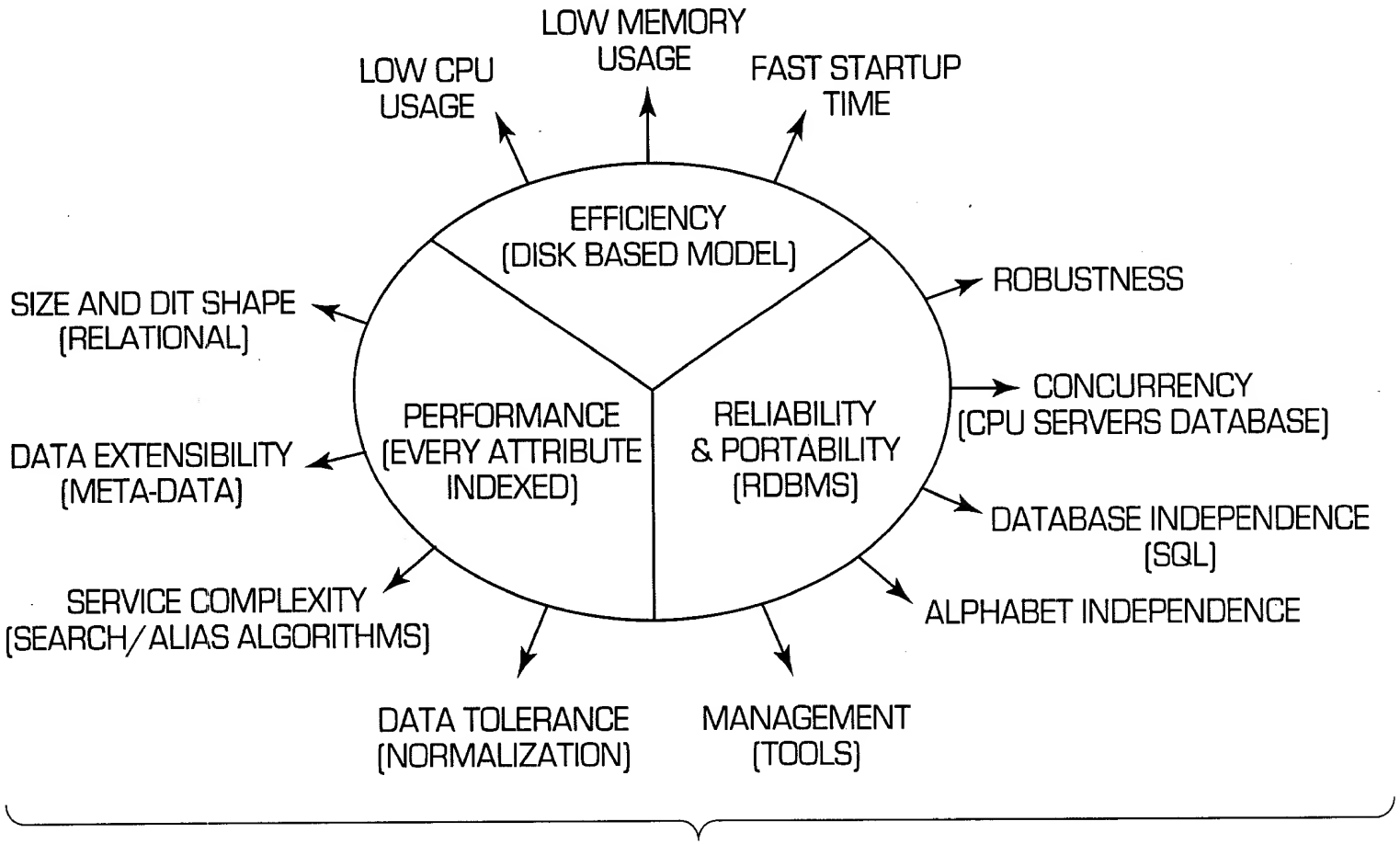

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FIG. 4

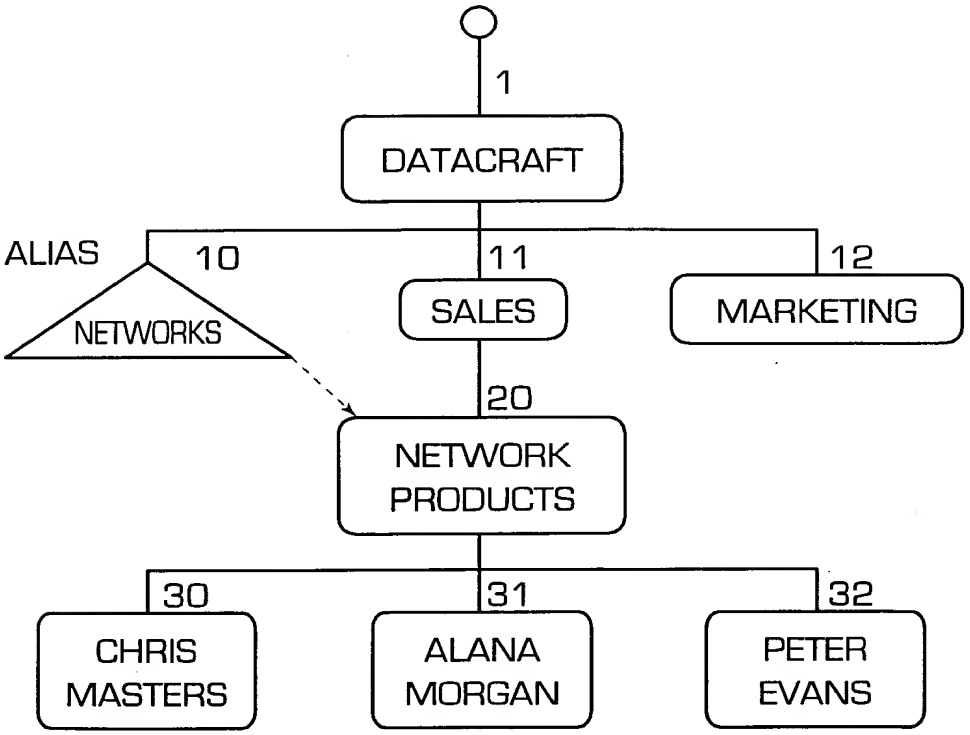

TABLE 3b/5a

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O.G. FIG.
CLASS
SUBCLASS

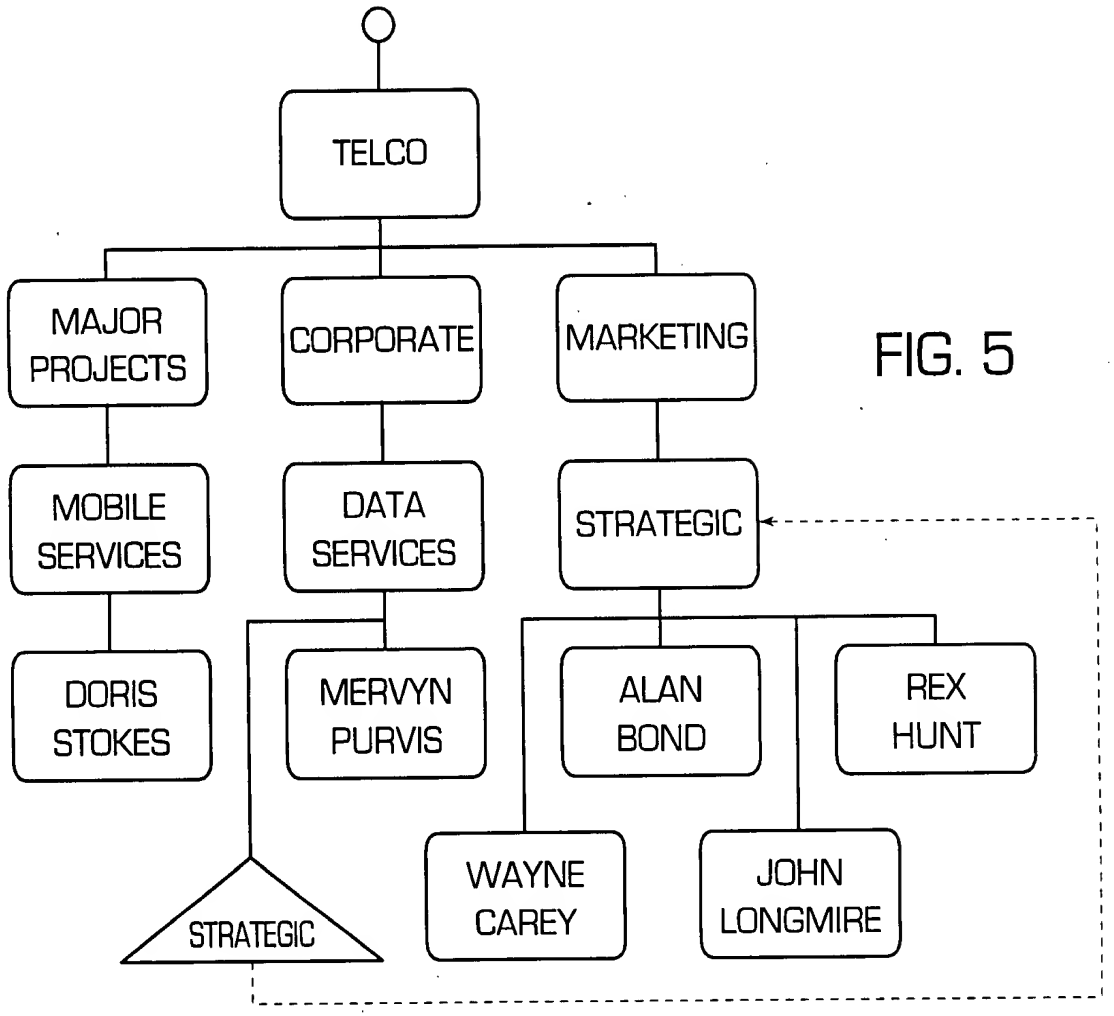

FIG. 5